AMENDMENTS TO THE CLAIMS

1. (original) An impedance circuit for providing an equivalent impedance between a first node and a second node comprising:

a first impedance for providing a first impedance value;

a first switch element electrically connected to the first impedance;

a second impedance for providing a second impedance value;

a second switch element electrically connected to the second impedance;

wherein the equivalent impedance is determined by the first impedance value and the second impedance value through controlling the turn on time and the turn off time of the first switch element and the second switch element.

2. (original) The impedance circuit of claim 1, wherein the first impedance and the second impedance are resistors.

3. (original) The impedance circuit of claim 1, further comprising a control circuit for generating a first control signal to turn on and turn off the first switch element, and a second control signal to turn on and turn off the second switch element.

4. (original) The impedance circuit of claim 3, wherein the equivalent impedance is determined by controlling the duty cycle of the first control signal and the second control signal.

5. (original) The impedance circuit of claim 3, wherein the first switch element comprises a first switch electrically connected between the first impedance and the first node, and the second switch element comprises a second switch electrically connected between the second impedance and the first node.

6. (original) The impedance circuit of claim 3, wherein the first switch element comprises a first switch electrically connected between the first impedance and the first node, and the second switch element comprises a second switch electrically connected between the second impedance and the second node.

7. (original) The impedance circuit of claim 1, wherein the first switch element comprises at least one first transmission gate turning on and off according to the first control signal, and the second switch element comprises at least one second transmission gate turning on and off according to the second control signal.

8. (original) The impedance circuit of claim 1, wherein the first switch element comprises at least one first MOS transistor turning on and off according to the first control signal, and the second switch element comprises at least one second MOS transistor turning on and off according to the second control signal.

9. (original) A method for controlling an impedance circuit to provide an equivalent impedance between a first node and a second node, the impedance circuit comprising a first impedance and a second impedance, the method comprising:

connecting the first impedance to the first node and the second node;

disconnecting the first impedance from the first node and the second node;

connecting the second impedance to the first node and the second node; and

disconnecting the second impedance from the first node and the second node;

wherein the equivalent impedance is determined by the first impedance and the second impedance, and by controlling the connecting time of the first impedance and the second impedance to the first node and the second node.

10. (original) The method of claim 9, wherein the first impedance and the second impedance are resistors.

11. (original) The method of claim 9, wherein the first impedance and the second impedance are alternatively connected to the first node and the second node.

12. (new) An impedance circuit for providing an equivalent impedance between a first node and a second node comprising:

a first impedance for providing a first impedance value;

a first switch element coupled to the first impedance;
a second impedance for providing a second impedance value; and
a second switch element coupled to the second impedance;
wherein the equivalent impedance is determined by continuously turning on and off the first switch element, and continuously turning on and off the second switch element.

13. (new) The impedance circuit of claim 12, wherein the first switch element is controlled to turn on and off by a first periodic signal.

14. (new) The impedance circuit of claim 13, wherein the second switch element is controlled to turn on and off by a second periodic signal.

15. (new) The impedance circuit of claim 12, wherein the first impedance comprises a first resistor, and the second impedance comprises a second resistor.

16. (new) The impedance circuit of claim 12, wherein the first impedance comprises a first capacitor, and the second impedance comprises a second capacitor.

17. (new) The impedance circuit of claim 12, wherein the first impedance comprises a first inductor, and the second impedance comprises a second inductor.

18. (new) The impedance circuit of claim 12, wherein a frequency of the continuous turning on and off of the first switch element and a frequency of the continuous turning on and off of the second switch element are both substantially higher than an operating frequency of the impedance circuit.

19. (new) The impedance circuit of claim 18, wherein the frequency of the continuous turning on and off of the first switch element and the frequency of the continuous turning on and off of the second switch element are both at least ten times higher than the operating frequency of the impedance circuit.

20. (new) An impedance circuit for providing an equivalent impedance between a first node and a second node comprising:
a first impedance for providing a first impedance value;
a first switch element coupled to the first impedance;
a second impedance for providing a second impedance value; and
a second switch element coupled to the second impedance;
wherein the equivalent impedance is determined by the first impedance value and the second impedance value through controlling frequencies of turning on and turning off the first switch element and the second switch element.

21. (new) The impedance circuit of claim 20, wherein the frequencies of turning on and turning off the first switch element and the second switch element are both substantially higher than an operating frequency of the impedance circuit.

22. (new) The impedance circuit of claim 21, wherein the frequencies of turning on and turning off the first switch element and the second switch element are both at least ten times higher than the operating frequency of the impedance circuit.